Upfront Preventive Measures Are Key

safety

External

Minimizing External Dose

Every effort is made to keep a worker's external dose to a minimum and well below regulatory limits. There are three basic guidelines:

Time
The time a worker may spend in a radioactive environment is strictly limited.

Distance
A worker uses remote handling devices (cameras, rods, cranes) whenever possible.

Shielding
A worker is provided with personal protective equipment and radiation safety training.

Physical barriers are used. A shielded work platform will be constructed so that work can be performed from a remote location during reactor vessel segmentation.

To minimize their exposure, workers use remote tools whenever possible.

NASA monitors each worker's external dose using a dosimeter, which is worn on the body and measures external dose over time.

Internal

Minimizing Internal Dose

Every effort is made to keep a worker's internal dose to a minimum and well below regulatory limits. Some preventive measures include:

Engineering Controls
Process and local ventilation systems using HEPA (High Efficiency Particulate Air) filters to capture or contain dust.

Personal Protective Equipment
Respiratory protection

Protective clothing

Administrative Controls/Best work practices
No eating, drinking, smoking or application of cosmetics

Radiation Work Permit required

NASA performs a bioassay on each worker to determine the types and amounts of isotopes that are present in his body (from natural sources and from previous radiation work).

INITIAL
When hired, provides baseline

ANNUAL
Detects any change from baseline

EVENT
If a specific exposure occurs

FINAL
When worker leaves or decommissioning is complete

NASA tracks each worker's level to check for accumulated internal dose, if any, during decommissioning work.

The average annual cumulative dose (internal + external) will be well below the regulatory health protective limits.

well below